

Title (en)
ABSORPTION-ENERGY-BASED ELECTRIC FIELD CANCER TREATMENT PLANNING SYSTEM AND METHOD

Title (de)
SYSTEM UND VERFAHREN ZUR PLANUNG DER BEHANDLUNG VON KREBS MIT EINEM ELEKTRISCHEN FELD BASIEREND AUF DER ABSORPTIONSENERGIE

Title (fr)
SYSTÈME ET PROCÉDÉ DE PLANIFICATION DE TRAITEMENT DU CANCER PAR CHAMP ÉLECTRIQUE À BASE D'ÉNERGIE D'ABSORPTION

Publication
EP 3967365 A4 20221228 (EN)

Application
EP 20829173 A 20200720

Priority
• KR 20200088365 A 20200716
• KR 2020009527 W 20200720

Abstract (en)
[origin: EP3967365A1] This proposal describes a system for planning electric field cancer treatment based on absorbed energy according to an embodiment of the present disclosure. This system includes an image classification unit to classify a patient's medical image into an organ and a tumor; a property information setting unit to set property information for each region classified by the image classification unit; a prescription information determination unit to set a prescription method, taking into account input type and condition information of the tumor, and to determine prescription information including prescribed dose, treatment times, treatment duration and treatment frequency; a dose calculation unit to initially set the number and location of electrodes used for electric field cancer treatment and the electric field intensity for each electrode, taking into account the location of each region classified by the image classification unit, and to calculate dose distribution in the body based on the initial settings; and a dose optimization unit to optimize the dose by changing at least one electrode, one electrode location or the electric field intensity of each electrode such that a maximal dose is delivered to the tumor and a minimal dose is delivered to surrounding normal tissues.

IPC 8 full level
A61N 1/40 (2006.01); **A61B 5/00** (2006.01); **A61B 5/053** (2021.01); **A61B 5/055** (2006.01); **A61B 6/00** (2006.01); **A61B 6/03** (2006.01); **A61N 1/08** (2006.01); **A61N 1/36** (2006.01)

CPC (source: EP KR US)
A61B 5/0036 (2018.08 - EP KR); **A61B 5/0537** (2013.01 - KR); **A61B 5/055** (2013.01 - EP KR); **A61B 5/4836** (2013.01 - EP); **A61B 5/7264** (2013.01 - EP KR); **A61B 6/032** (2013.01 - KR); **A61B 6/5217** (2013.01 - KR); **A61N 1/0476** (2013.01 - KR); **A61N 1/08** (2013.01 - EP US); **A61N 1/36002** (2017.08 - EP KR US); **A61N 1/36034** (2017.08 - KR); **A61N 1/40** (2013.01 - EP KR US); **G06T 7/11** (2017.01 - US); **G06T 2207/10081** (2013.01 - US); **G06T 2207/10088** (2013.01 - US); **G06T 2207/20081** (2013.01 - US); **G06T 2207/30096** (2013.01 - US)

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• See also references of WO 2022014761A1

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Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 3967365 A1 20220316; EP 3967365 A4 20221228; CN 114269274 A 20220401; JP 2022544720 A 20221021; JP 7459047 B2 20240401; KR 102490645 B1 20230125; KR 20220009764 A 20220125; KR 20220152989 A 20221117; US 12011589 B2 20240618; US 2022184391 A1 20220616; WO 2022014761 A1 20220120

DOCDB simple family (application)
EP 20829173 A 20200720; CN 202080004054 A 20200720; JP 2021502968 A 20200720; KR 20200088365 A 20200716; KR 2020009527 W 20200720; KR 20220146753 A 20221107; US 202017259492 A 20200720